

DATE IN 1/11/08	SUSPENSE	ENGINEER W. S. Jones	LOGGED IN 1/11/08	DHC TYPE	PRVROB01141223 APP NO.
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ABOVE THIS LINE FOR DIVISION USE ONLY

3993

## NEW MEXICO OIL CONSERVATION DIVISION

- Engineering Bureau -

1220 South St. Francis Drive, Santa Fe, NM 87505



### ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

#### Application Acronyms:

**[NSL-Non-Standard Location]** **[NSP-Non-Standard Proration Unit]** **[SD-Simultaneous Dedication]**  
**[DHC-Downhole Commingling]** **[CTB-Lease Commingling]** **[PLC-Pool/Lease Commingling]**  
**[PC-Pool Commingling]** **[OLS - Off-Lease Storage]** **[OLM-Off-Lease Measurement]**  
**[WFX-Waterflood Expansion]** **[PMX-Pressure Maintenance Expansion]**  
**[SWD-Salt Water Disposal]** **[IPI-Injection Pressure Increase]**  
**[EOR-Qualified Enhanced Oil Recovery Certification]** **[PPR-Positive Production Response]**

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
- [A] Location - Spacing Unit - Simultaneous Dedication  
☐ NSL ☐ NSP ☐ SD
- Check One Only for [B] or [C]
- [B] Commingling - Storage - Measurement  
☒ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery  
☐ WFX ☐ PMX ☐ SWD ☐ IPI ☐ EOR ☐ PPR
- [D] Other: Specify \_\_\_\_\_
- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply
- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
- [B] ☐ Offset Operators, Leaseholders or Surface Owner
- [C] ☐ Application is One Which Requires Published Legal Notice
- [D] ☒ Notification and/or Concurrent Approval by BLM or SLO  
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] ☒ For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] ☐ Waivers are Attached

- [3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

- [4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

BRIAN COLLINS

Print or Type Name

Signature

ENGINEER

Title

01/04/08

Date

engineering@marbob.com  
e-mail Address

RECEIVED  
2008 JAN 10 PM 1 42

District I  
1625 N. French Drive, Hobbs, NM 88240  
District II  
1301 W. Grand Avenue, Artesia, NM 88210  
District III  
1000 Rio Brancos Road, Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-107A  
Revised June 10, 2003

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

APPLICATION TYPE  
☒ Single Well  
☐ Establish Pre-Approved Pools  
EXISTING WELLBORE  
☒ Yes ☐ No

APPLICATION FOR DOWNHOLE COMMINGLING

MARBOB ENERGY CORPORATION P O BOX 227  
Operator Address  
RED RYDER STATE COM 1 A/H - 25-25S-27E EDDY COUNTY, NM  
Lease Well No. Unit Letter-Section-Township-Range County  
OGRID No. 14049 Property Code 36027 API No. 30-015-35150 Lease Type: ☐ Federal ☒ State ☐ Fee

DATA ELEMENT	UPPER ZONE	INTERMEDIATE ZONE	LOWER ZONE
Pool Name	UNDESIGNATED DELAWARE		UNDESIGNATED BONE SPRING
Pool Code			
Top and Bottom of Pay Section (Perforated or Open-Hole Interval)	4292-5785' PERF		8178-8204' PERF
Method of Production (Flowing or Artificial Lift)	ARTIFICIAL LIFT		ARTIFICIAL LIFT
Bottomhole Pressure (Note: Pressure data will not be required if the bottom perforation in the lower zone is within 150% of the depth of the top perforation in the upper zone)	50-200 PSI PRODUCING BHP		400 PSI PRODUCING BHP
Oil Gravity or Gas BTU (Degree API or Gas BTU)	43°		45°
Producing, Shut-In or New Zone	NEW ZONE		PRODUCING
Date and Oil/Gas/Water Rates of Last Production. (Note: For new zones with no production history, applicant shall be required to attach production estimates and supporting data.)	Date: N/A Rates:	Date: Rates:	Date: 7 DEC 07 Rates: 20 BOPD 70 MCFD
Fixed Allocation Percentage (Note: If allocation is based upon something other than current or past production, supporting data or explanation will be required.)	Oil Gas 68 % 69 %	Oil Gas % %	Oil Gas 32 % 31 %

ADDITIONAL DATA

Are all working, royalty and overriding royalty interests identical in all commingled zones? Yes ☒ No ☐  
If not, have all working, royalty and overriding royalty interest owners been notified by certified mail? Yes ☐ No ☐  
Are all produced fluids from all commingled zones compatible with each other? Yes ☒ No ☐  
Will commingling decrease the value of production? Yes ☐ No ☒  
If this well is on, or communitized with, state or federal lands, has either the Commissioner of Public Lands or the United States Bureau of Land Management been notified in writing of this application? Yes ☒ No ☐  
NMOCD Reference Case No. applicable to this well: \_\_\_\_\_

Attachments:

C-102 for each zone to be commingled showing its spacing unit and acreage dedication.  
Production curve for each zone for at least one year. (If not available, attach explanation.)  
For zones with no production history, estimated production rates and supporting data.  
Data to support allocation method or formula.  
Notification list of working, royalty and overriding royalty interests for uncommon interest cases.  
Any additional statements, data or documents required to support commingling.

PRE-APPROVED POOLS

If application is to establish Pre-Approved Pools, the following additional information will be required:

List of other orders approving downhole commingling within the proposed Pre-Approved Pools  
List of all operators within the proposed Pre-Approved Pools  
Proof that all operators within the proposed Pre-Approved Pools were provided notice of this application.  
Bottomhole pressure data.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Brian Collins TITLE ENGINEER DATE 01/04/08  
TYPE OR PRINT NAME BRIAN COLLINS TELEPHONE NO. ( 505 ) 748-3303  
E-MAIL ADDRESS engineering@marbob.com

**Engineering Summary**  
**Form C-107A**  
**Application for Downhole Commingling**

Marbob Energy Corporation  
Red Ryder State Com No. 1 (Unit A/H, Sec. 25-T25S-R27E)

Marbob Energy proposes to downhole commingle the Bone Spring and Delaware in the captioned well.

No crossflow will occur because this well will be rod pumped in a pumped down condition. The proposed zonal allocation is described below. The best engineering estimate is that the Bone Spring decline behavior over time will approximate the Delaware decline behavior

Bone Spring: Best engineering estimate is that the Bone Spring will come in at 20 bopd/70 mcf. The best engineering estimate is that the oil will decline 50%/yr for 1 year, 25%/yr for 4 years, followed by 10%/yr thereafter. The best engineering estimate is that the gas will decline 50%/yr for 1 year, 25%/yr for 4 years, followed by 10%/yr thereafter.

Q<sub>oil</sub> = 20 bopd.  
Q<sub>1yr</sub> = 10 bopd  
Q<sub>5yr</sub> = 3 bopd  
Q<sub>el</sub> = 0.5 bopd

$$\begin{aligned} \text{EUR oil} &= \frac{-365 (20-10)}{\ln (1-.50)} + \frac{-365 (10-3)}{\ln (1-.25)} + \frac{-365 (3-0.5)}{\ln (1-.10)} \\ &= 5265 + 8881 + 8661 \text{ BO} \\ &= 22807 \text{ BO} \end{aligned}$$

Q<sub>gas</sub> = 70 mcf  
Q<sub>1yr</sub> = 35 mcf  
Q<sub>5yr</sub> = 11 mcf  
Q<sub>el</sub> = 5 mcf

$$\begin{aligned} \text{EUR gas} &= \frac{-365 (70-35)}{\ln (1-.50)} + \frac{-365 (35-11)}{\ln (1-.25)} + \frac{-365 (11-5)}{\ln (1-.10)} \\ &= 18430 + 30450 + 20786 \text{ MCF} \\ &= 69666 \text{ MCF} \end{aligned}$$

Delaware: Best engineering estimate is that the Delaware will start out at 40 bopd/140 mcf and will decline as described for the Bone Spring.

Q<sub>oil</sub> = 40 bopd  
Q<sub>1yr</sub> = 20 bopd  
Q<sub>5yr</sub> = 6.3 bopd  
Q<sub>el</sub> = 0.5 bopd

$$\begin{aligned}\text{EUR oil} &= \frac{-365 (40-20)}{\ln (1-.50)} + \frac{-365 (20-6.3)}{\ln (1-.25)} + \frac{-365 (6.3-0.5)}{\ln (1-.10)} \\ &= 10532 + 17382 + 20093 \text{ BO} \\ &= 48007 \text{ BO}\end{aligned}$$

Q<sub>i</sub> = 140 mcf  
Q<sub>1yr</sub> = 70 mcf  
Q<sub>5yr</sub> = 22 mcf  
Q<sub>el</sub> = 5 mcf

$$\begin{aligned}\text{EUR gas} &= \frac{-365 (140-70)}{\ln (1-.50)} + \frac{-365 (70-22)}{\ln (1-.25)} + \frac{-365 (22-5)}{\ln (1-.10)} \\ &= 36861 + 60901 + 58893 \text{ MCF} \\ &= 156,655 \text{ MCF}\end{aligned}$$

#### Zonal Allocation

$$\text{Bone Spring Oil} = \frac{22807 \text{ BO}}{22807 + 48007 \text{ BO}} = 32.21\% \text{ Say } 32\%$$

$$\text{Bone Spring Gas} = \frac{69666 \text{ MCF}}{69666 + 156,655 \text{ MCF}} = 30.78\% \text{ Say } 31\%$$

$$\text{Delaware Oil} = 100 - 32\% = 68\%$$

$$\text{Delaware Gas} = 100 - 31\% = 69\%$$

District I

1625 N. French Dr., Hobbs, NM 88240

District II

1301 W. Grand Ave., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV

1220 S. St Francis Dr., Santa Fe, NM 87505

**State of New Mexico**  
**Energy, Minerals and Natural Resources**  
**Oil Conservation Division**  
**1220 S. St Francis Dr.**  
**Santa Fe, NM 87505**

Fonn C-102  
 Permit 38339

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1. API Number 30-015-35150	2. Pool Code 78260	3. Pool Name HAY HOLLOW;MORROW (GAS)
4. Property Code 36027	5. Property Name RED RYDER STATE COM	6. Well No. 001
7. OGRID No. 14049	8. Operator Name MARBOB ENERGY CORP	9. Elevation 3015

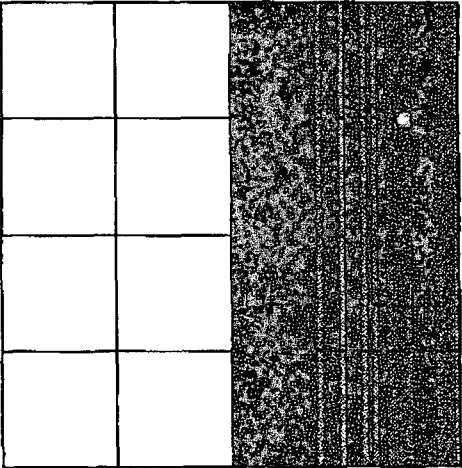
**10. Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
A	25	25S	27E	A	1320	N	660	E	EDDY

**11. Bottom Hole Location If Different From Surface**

UL - Lot	Section	Township	Range	Lot Idn	Feet From	N/S Line	Feet From	E/W Line	County
12. Dedicated Acres 320.00	13. Joint or Infill	14. Consolidation Code	15. Order No.						

**NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION**

	<p style="text-align: center;"><b>OPERATOR CERTIFICATION</b></p> <p><i>I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location(s) or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p>E-Signed By: Diana Briggs          Title: Production Analyst          Date: 9/20/2006</p> <hr/> <p style="text-align: center;"><b>SURVEYOR CERTIFICATION</b></p> <p><i>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</i></p> <p>Surveyed By: Gary Eidson          Date of Survey: 8/25/2006          Certificate Number: 12641</p>
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Submit 3 Copies To Appropriate District  
Office  
District I  
1625 N. French Dr., Hobbs, NM 88240  
District II  
1301 W. Grand Ave., Artesia, NM 88210  
District III  
1000 Rio Brazos Rd., Aztec, NM 87410  
District IV  
1220 S. St. Francis Dr., Santa Fe, NM  
87505

State of New Mexico  
Energy, Minerals and Natural Resources

Form C-103  
May 27, 2004

OIL CONSERVATION DIVISION  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-015-35150
1. Type of Well: Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other <input type="checkbox"/>		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator MARBOB ENERGY CORPORATION		6. State Oil & Gas Lease No.
3. Address of Operator P O BOX 227 ARTESIA NM 88211-0227		7. Lease Name or Unit Agreement Name RED RYDER STATE COM
4. Well Location Unit Letter A/H : 1320 feet from the NORTH line and 660 feet from the EAST line Section 25 Township 25S Range 27E NMPM EDDY County NM		8. Well Number 1
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3015' GR		9. OGRID Number 14049
Pit or Below-grade Tank Application <input type="checkbox"/> or Closure <input type="checkbox"/>		
Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____		
Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____		

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK <input type="checkbox"/>	PLUG AND ABANDON <input type="checkbox"/>	REMEDIAL WORK <input type="checkbox"/>	ALTERING CASING <input type="checkbox"/>
TEMPORARILY ABANDON <input type="checkbox"/>	CHANGE PLANS <input type="checkbox"/>	COMMENCE DRILLING OPNS. <input type="checkbox"/>	P AND A <input type="checkbox"/>
PULL OR ALTER CASING <input type="checkbox"/>	MULTIPLE COMPL <input type="checkbox"/>	CASING/CEMENT JOB <input type="checkbox"/>	
OTHER: DOWNHOLE COMMINGLING <input checked="" type="checkbox"/>		OTHER: <input type="checkbox"/>	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

SEE ATTACHED C-107A APPLICATION FOR DOWNHOLE COMMINGLING.

THE PROPOSED ALLOCATION IS: UNDESIGNATED BONE SPRING - OIL 32% - GAS 31%  
UNDESIGNATED DELAWARE - OIL 68% - GAS 69%

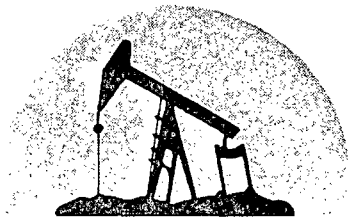
NEW ALLOCATIONS WILL BE SUBMITTED IF ACTUAL WELL PRODUCTION IS SIGNIFICANTLY DIFFERENT THAN THAT ABOVE.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Brian Collins TITLE ENGINEERING DATE 01/04/08

Type or print name BRIAN COLLINS E-mail address: engineering@marbob.com Telephone No. 575-748-3303  
**For State Use Only**

APPROVED BY: \_\_\_\_\_ TITLE \_\_\_\_\_ DATE \_\_\_\_\_  
Conditions of Approval (if any): \_\_\_\_\_



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**marbob**  
energy corporation

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January 4, 2008

New Mexico State Land Office  
Oil, Gas & Minerals Division  
P. O. Box 1148  
Santa Fe, NM 87504-1148

Attn: Ms. Jamie Bailey

Re: C-107A Downhole Commingling Application  
Red Ryder State Com #1  
Township 25 South, Range 27 East, NMPM  
Sec. 25: Unit A/H  
Eddy County, New Mexico

Dear Ms. Bailey:

Enclosed is the \$30.00 application fee and copy of the Form C-107A Application for Downhole Commingling that we submitted to the NMOCD for the referenced well located in Eddy County.

We are seeking approval to downhole commingle the Bone Spring and Delaware zones to extend the economic life of the well and maximize the financial benefit to the State of New Mexico.

If you have any questions, please call me at 505-748-3303.

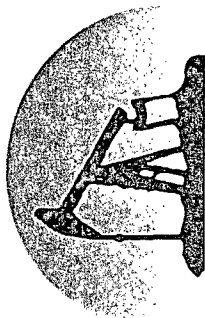
Sincerely,

Brian Collins  
Petroleum Engineer

BC/dlw  
enclosures

INVOICE DATE	INVOICE NO.	DESCRIPTION	INVOICE TOTAL	ADJUSTMENTS	DISCOUNT	NET AMOUNT
1/7/08		APPLICATION FEE/DOWNHOLE COMMINGLING - RED RYDER ST COM	\$ 30.00			\$ 30.00


050994



**MARBOB ENERGY CORPORATION**

2208 W. MAIN  
P.O. BOX 227  
ARTESIA, NEW MEXICO 88211-0227  
(505) 748-3303

PLEASE DETACH BEFORE DEPOSITING. RETAIN TOP PORTION FOR YOUR RECORDS.

 <p>2208 W. MAIN P.O. BOX 227 ARTESIA, NEW MEXICO 88211-0227 (505) 748-3303</p>		<p>050994</p> <p>95-43/1122</p>					
<p><b>*****THIRTY DOLLARS AND 00/100*****</b></p>		<p><b>FIRST NATIONAL BANK</b> P.O. DRAWER AA ARTESIA, NM 88210</p>					
<p>PAY TO THE ORDER OF NEW MEXICO STATE LAND OFFICE OIL, GAS &amp; MINERALS DIVISION PO BOX 1148 SANTA FE, NM 87504-1148</p>		<table border="1"> <tr> <th>DATE</th> <th>CHECK AMOUNT</th> </tr> <tr> <td>1/7/08</td> <td>\$30.00</td> </tr> </table> <p>MARBOB ENERGY CORPORATION</p> <p><i>[Signature]</i></p>		DATE	CHECK AMOUNT	1/7/08	\$30.00
DATE	CHECK AMOUNT						
1/7/08	\$30.00						

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